# Luna Home Assignment for Senior Automation Engineer:

# Currency Converter API

In this assignment you are required to plan **API** tests for a currency conversion cloud-service API and then implement automation testing of the API.

Please read the instructions carefully before you begin and reply within the given timeframe.

If you don’t have enough time, it is preferred that you’ll deliver **all** requirements even if each is not complete, rather than completing 100% of just few of the requirements.

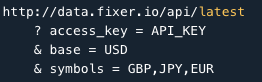
Please don’t hesitate to contact us with any question you might have.

## System Details:

The SUT (system under test) is an open-source project found here: <http://fixer.io/>

The entire API documentation is found here: <https://fixer.io/documentation>

**For example**, the following API call:



will reply with a JSON representing the latest USD to GBP (Lira Sterling), JPY (YEN) and EUR (Euro) exchange rate:



In order to interact with the API, you would need to sign-up for the “free-plan" and get a free TOKEN:

1. Sign-up here <https://fixer.io/signup/free>
2. Once submitted you will be redirected to “QuickStart” page.
3. Follow the instructions on this page for how to append your TOKEN onto the endpoint URI

## System versions:

**Current version (“version 1.0”):**

The current API version functionality is as described on API documentation page (<https://fixer.io/documentation>)

It contains few available endpoints (see [documentation](https://fixer.io/documentation)) but only few of them are open for the “fixer-free-plan".

So while targeting all endpoints on your Test-Plan, please focus **only** on the available endpoints when **implementing** it in your code.

These are the available endpoints in the free plan:

* Supported Symbols Endpoint
* [Latest Rates Endpoint](https://fixer.io/documentation#latestrates), **without specifying “base” & ”symbols” params**
* [Historical Rates Endpoint](https://fixer.io/documentation#historicalrates)

**Next version (“version 1.1”):**

The next version of the system will introduce a new functionality: Currency Rate **Prediction**, according to the following requirements:

1. Currency prediction supports only next trading day prediction (i.e., the system will not predict two days or more ahead)
2. Prediction is available on the API by using the keyword “tomorrow” instead of “latest” / “YYYY-MM-DD”. For example: <https://api.fixer.io/tomorrow?base=USD&symbols=ILS> (this link is broken as the feature is **not implemented yet**)
3. On the response of the API, the date will be the date of next day

## Assignment Tasks:

1. **Write a test plan** for current version 1.0 of the API:

Use any document format you like (Excel, Document, Google Sheet, Whatever) as long as it can be opened easily

Tip A: have a structural testing tree

Tip B: invest also in the non-functional side of it

1. **Implement automation testing** according to your test plan.

TIP C: **python** and **pytest** are **preferable**, but you can use any framework & language you like, as long as we’ll be able to run it as well :)

Tip D: try and demonstrate your logical ability to **abstract** your code

Tip E, **Bonus**: try and use at least 1 **design pattern** in your code

1. Add additional tests-cases required to cover the **new Currency Rate Prediction** feature (version 1.1)

Please Note: the free plan is limited to max 100 call, so please make sure not to exceed this limit.

# Good Luck from Luna Team!